CLAIMS

1. A semiconductor laser device characterized by comprising:

a resonant cavity made up of a plurality of semiconductor layers; and

a reflective film, which contains niobium oxide and is formed on an end facet of the resonant cavity.

2. The semiconductor laser device of Claim 1, characterized in that the resonant cavity has an oscillation wavelength of about 400 nm or less.

3. The semiconductor laser device of Claim 1, characterized in that the semiconductor layers are made of Group III-V nitride semiconductors.

4. A semiconductor laser device characterized by comprising:

a resonant cavity made up of a plurality of semiconductor layers; and

a reflective film, which is formed on an end facet of the resonant cavity and includes a first dielectric layer and a second dielectric layer having a refractive index greater than that of the first dielectric layer,

the device being characterized in that the second di-

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electric layer is made of niobium oxide.

5. The semiconductor laser device of Claim 4, characterized in that the first dielectric layer is made of silicon dioxide or aluminum oxide.

6. The semiconductor laser device of Claim 4, characterized in that the resonant cavity has an oscillation wavelength of about 400 nm or less.

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7. The semiconductor laser device of Claim 4, characterized in that the semiconductor layers are made of Group III-V nitride semiconductors.

8. A semiconductor laser device characterized by comprising:

a resonant cavity made up of a plurality of semiconductor layers; and

a reflective film, which is formed on an end facet of the resonant cavity by alternately stacking first and second dielectric layers, each said second dielectric layer having a refractive index greater than that of the first dielectric layers,

the device being characterized in that at least one of the second dielectric layers, which is closest to the end

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facet of the resonant cavity, is made of niobium oxide.

9. The semiconductor laser device of Claim 8, characterized in that the first dielectric layers are made of silicon dioxide or aluminum oxide.

10. The semiconductor laser device of Claim 8, characterized in that the resonant cavity has an oscillation wavelength of about 400 nm or less.

11. The semiconductor laser device of Claim 8, characterized in that the semiconductor layers are made of Group III-V nitride semiconductors.

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12. A method for fabricating a semiconductor laser device, characterized by comprising the steps of:

forming a resonant cavity structure by sequentially depositing a plurality of semiconductor layers on a substrate;

exposing an end facet of a resonant cavity on the semiconductor layers by cleaving or etching the substrate on which the semiconductor layers have been deposited; and

forming a reflective film containing niobium oxide on the exposed end facet of the resonant cavity.

13. The method of Claim 12, characterized in that the

step of forming the reflective film includes the step of forming the reflective film as a multilayer structure including a first dielectric layer with a refractive index smaller than that of niobium oxide and a second dielectric layer of niobium oxide.

14. The method Claim 12, characterized in that the reflective film is formed by a sputtering process or a reactive sputtering process.

15. The method for Claim 12, characterized in that the semiconductor layers are made of Group III-V nitride semiconductors.

16. An optical disk apparatus characterized by comprising:

a light-emitter including a semiconductor laser device;

a condensing optical system that condenses laser light emitted from the light-emitter on a storage medium on which data has been recorded; and

a photodetector that detects part of the laser light that has been reflected from the storage medium,

the laser device being characterized by including:

a resonant cavity made up of a plurality of semiconductor layers; and

a reflective film, which contains niobium oxide and is formed on an end facet of the resonant cavity.